

Worksheet: Evaluating Functions, Composite Functions, Inverse Functions

Name _____ Date _____

1. The functions $f(x)$ and $g(x)$ are defined as follows:

$$f(x) = 3x + 5 \text{ and } g(x) = 9 - 4x.$$

(a) Evaluate $f(2)$ and $g(-3)$.

(b) Find $g^{-1}(x)$

(c) Write an expression, in terms of x , for $gf(x)$.

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2. Given $f(x) = \frac{6x-5}{2}$ and $h(x) = 4x + 7$.
- (a) Evaluate $h(-2)$.

(b) Find $hf(4)$.

(c) Write an expression, in terms of x , for $f^{-1}(x)$.

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3. Given $f(x) = 9x + 8$ and $g(x) = x^2 + 2$, find:

(a) $g(-3)$;

(b) $(f \circ g)(2)$

(c) $g^{-1}(3)$